**University of West Alabama**

**COE**

**5E Lesson Plan**

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| Teacher: Emily Pate\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Date: November 24, 2014\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Subject area/course/grade level: Science/Chemistry/10th - 12th Grades/Blocks 1 & 2\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Materials: Textbook (Modern Chemistry); Internet access and computers for Classtools.net website and educational research (if needed); summative assessment; formative assessment; and online Quiz/Game examples (http://www.classtools.net/widgets/quiz\_63/Periodic\_Table\_Quiz\_CCEo5.htm AND http://www.classtools.net/widgets/dustbin\_7/7gHyJ.htm)  Standards: Chemistry Core - COS #1 and 5 and NETS-S #1 – 5\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Objectives: The learner will use both traditional text and electronic sources of information to create a review game set up in the form of a quiz for the purpose of reviewing the Chemistry core curriculum for the final examination. The learner will synthesize questions and the corresponding answers relating to their assigned topic. Each student will write ten questions relating to their Chemistry topic. The learner will use technological tools to create an educational game for the class that will both share and test the learner's knowledge of topics covered within the semester course.  Differentiation Strategies: Use IEPs or 504 plans for guidance for any students with accommodations (none this semester). Use various methods of communication to aid students who do not excel in verbal and/or written communication. Encourage classmates of these students to also use various forms of communication including but not limited to drawing diagrams, making a simplified list, and verbally communicating the directions for the assignment in order to aid any students who may have learning difficulties.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| **ENGAGEMENT:**  Review information from the last few curriculum units. This will refresh students and encourage them to participate by reviewing past information that they have already learned. Use the classroom “squishy ball” (a small Nerf ball) and toss to a student to answer the first review question. Have that student then pass the ball to the next student who is ready to answer the following review question. Keep this going until you have completed all the review questions from the textbook review guide. By enabling students to see how the all the units relate to one another, it can help them have a better understanding of the course as a whole.  Assessment: Student answers to the review questions can highlight areas that need further review. |
| **EXPLORATION:**  This project will allow students to review course material and work on their communication and time management skills. The teacher will assign students to one of two topics (Binary Compound Naming or Kinetics). Each student will be responsible for generating ten questions about their assigned topic. An example game for each topic can be found using the links http://www.classtools.net/widgets/quiz\_63/Periodic\_Table\_Quiz\_CCEo5.htm AND http://www.classtools.net/widgets/dustbin\_7/7gHyJ.htm. These questions will then need to be entered into an online quiz or game by the students. Students will first play their own game and then will switch with their classmates to play their games as well. This will test to see what information the students have retained through their review.  Assessment: Summative and Formative Assessment through created rubrics. |
| **EXPLANATION:**  Before asking students to generate a list of questions for their game, quickly review Units 1 – 10 that have been covered so far in the semester. Encourage students to pick questions that they are less familiar with in order to challenge them and cause them to review some of the harder concepts. These are all aspects that students will make questions for on their own, but will need a good amount of review through traditional teaching methods after the project in order to confidently evaluate these concepts.  Assessment: Verbal feedback during Unit review on whether or not they remember core concepts. |
| **ELABORATION:**  The students have now started to review almost an entire course worth of material. The next step is to have the students get to a deeper level of understanding. By creating questions on their own, students are now having to not only understand the basic principles of each topic, but understand how they relate to one another. Once back in class, have students discuss how they generated questions for their assigned topic (looked over past study guides, looked at review questions in the book, isolated information from class notes, etc.). This not only shows the students that they have the means and ability to apply critical thinking to their studies, but that they are able to be self-reliant when it comes to studying. They do not have to wait to study until I hand out the Unit Test study guide.  Assessment: Write down on the white board in the front of the class all the ways students listed that they generated questions. Show them that they are able to study along the way and do not require a guide from their teacher to know how to study for a test or exam. |
| **EVALUATION:**  Play the students’ games with the class to gain an informal assessment of the questions they did not cover and see what questions stump the class. If the students were not able to synthesize the required information into an online game, they most likely would not have been very interested in completing the assignment in just a worksheet format. |

References:

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Polman, J.L. (2000). *Designing project-based silence: Connecting learners through guided inquiry.* New York: Teachers College Press.